Claims

1.   Apparatus for conducting a plurality of transactions to dispense postage, the apparatus comprising:

a memory for storing accounting data concerning postage dispensation, the accounting data varying with the transactions; and

a plurality of processors, each processor being associated with a different subset of the transactions, 10 each processor verifying the accounting data for at least the transactions in the subset associated with the processor.

2.   The apparatus of claim 1 wherein the accounting data includes an amount of a fund available for the 15 postage dispensation.

3.   The apparatus of claim 1 wherein the accounting data includes a cumulative amount of the postage dispensation.

4.   The apparatus of claim 1 wherein the accounting 20 data includes indices for identifying the transactions.

5.   The apparatus of claim 1 wherein the memory includes a non-volatile memory.

6.   The apparatus of claim 1 wherein each processor also stores records concerning the transactions in the 25 subset associated with the processor.

7.   Apparatus for generating a code for authenticating a postage indicium representing a plurality of data elements, the apparatus comprising:

an interface for receiving at least one of the data 30 elements;

a number of processors; and

a mechanism for selecting one of the processors to generate the code by performing a plurality of computations, a first one of the computations being independent of the at least one of the data elements, a second one of the computations being dependent on the at least one of the data elements, the number of processors being a function of a first duration for performing the first one of the computations and a second duration for performing the second one of the computations.

8. The apparatus of claim 7 wherein the number of processors is a function of a ratio of the first duration to the second duration.

9. The apparatus of claim 7 wherein each one of the processors is selected periodically.

10. The apparatus of claim 7 wherein the first one of the computations includes generation of a random number.

11. The apparatus of claim 7 wherein the first one of the computations includes a computation based on a value of the random number.

12. The apparatus of claim 7 wherein the second one of the computations includes a computation based on a value of a private key in accordance with a cryptographic algorithm.

13. The apparatus of claim 7 wherein the code includes a digital signature.

14. The apparatus of claim 13 wherein the first one of the computations includes a computation of a signature value r in accordance with a digital signature algorithm (DSA).

15.   The apparatus of claim 14 wherein the second one of the computations includes a computation of a signature value s in accordance with the DSA.

16.   Apparatus for conducting a sequence of transactions for generating postage indicia, each postage indicium containing a plurality of data elements, the apparatus comprising:

an interface for receiving a postage value in a transaction;

a first processor for generating an ensemble of information containing data derived from at least the postage value;

a plurality of second processors; and

a mechanism for providing the ensemble to a selected one of the second processors, the selected second processor generating at least one of the data elements.

17.   The apparatus of claim 16 wherein the data is also derived from postage values in selected transactions prior to the transaction.

18.   The apparatus of claim 17 wherein the number of selected transactions is a function of the number of second processors.

19.   The apparatus of claim 16 wherein the ensemble of information also contains an index identifying the transaction.

20.   The apparatus of claim 16 wherein the ensemble of information also contains second data concerning an increased amount of a fund available for postage dispensation.

21.   The apparatus of claim 16 wherein the at least one of the data elements includes a code for

authenticating the postage indicium.

22. The apparatus of claim 21 wherein the code includes a digital signature.

23. The apparatus of claim 22 wherein the ensemble
5   of information also contains a subset of the data elements, the digital signature being derived from the subset of the data elements.

24. A method for use in an apparatus for conducting a plurality of transactions to dispense postage, the
10   apparatus including a plurality of processors, each processor being associated with a different subset of the transactions, the method comprising:
     storing accounting data concerning postage dispensation, the accounting data varying with the
15   transactions; and
     verifying by each processor the accounting data for at least the transactions in the subset associated with the processor.

25. The method of claim 24 wherein the accounting
20   data includes an amount of a fund available for the postage dispensation.

26. The method of claim 24 wherein the accounting data includes a cumulative amount of the postage dispensation.

25   27. The method of claim 24 wherein the accounting data includes indices for identifying the transactions.

28. The method of claim 24 further comprising storing by each processor records concerning the transactions in the subset associated with the processor.

29.   A method for use in an apparatus for generating
a code for authenticating a postage indicium representing
a plurality of data elements, the apparatus including a
number of processors, the method comprising:

5   receiving at least one of the data elements; and
         selecting one of the processors to generate the code
by performing a plurality of computations, a first one of
the computations being independent of the at least one of
the data elements, a second one of the computations being

10   dependent on the at least one of the data elements, the
number of processors being a function of a first duration
for performing the first one of the computations and a
second duration for performing the second one of the
computations.

15   30.   The method of claim 29 wherein the number of
processors is a function of a ratio of the first duration
to the second duration.

         31.   The method of claim 29 wherein each one of the
processors is selected periodically.

20   32.   The method of claim 29 wherein the first one of
the computations includes generation of a random number.

         33.   The method of claim 29 wherein the first one of
the computations includes a computation based on a value

25   of the random number.

         34.   The method of claim 29 wherein the second one
of the computations includes a computation based on a
value of a private key in accordance with a cryptographic
algorithm.

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         35.   The method of claim 29 wherein the code
includes a digital signature.

36. The method of claim 35 wherein the first one of the computations includes a computation of a signature value r in accordance with a DSA.

37. The method of claim 36 wherein the second one of the computations includes a computation of a signature value s in accordance with the DSA.

38. A method for use in an apparatus for conducting a sequence of transactions for generating postage indicia, each postage indicium containing a plurality of data elements, the apparatus including a first processor and a plurality of second processors, the method comprising:

receiving a postage value in a transaction;

generating by the first processor an ensemble of information containing data derived from at least the postage value; and

providing the ensemble to a selected one of the second processors, the selected second processor generating at least one of the data elements.

39. The method of claim 38 wherein the data is also derived from postage values in selected transactions prior to the transaction.

40. The method of claim 39 wherein the number of selected transactions is a function of the number of second processors.

41. The method of claim 38 wherein the ensemble of information also contains an index identifying the transaction.

42. The method of claim 38 wherein the ensemble of information also contains second data concerning an increased amount of a fund available for postage

dispensation.

43. The method of claim 38 wherein the at least one of the data elements includes a code for authenticating the postage indicium.

5   44. The method of claim 43 wherein the code includes a digital signature.

45. The method of claim 44 wherein the ensemble of information also contains a subset of the data elements, the digital signature being derived from the subset of
10   the data elements.